

communications assembly must be shown or the feature canceled from the claims. Claim 8 was the only claim including the communications assembly feature, and it has now been canceled. Therefore, it is respectfully submitted that objection to the drawings should now be withdrawn.

Claims 1, 3, 7, 9-11, 14-15, 17, and 19 were rejected under 35 U.S.C. § 102(b) as being anticipated by Van Oosten et al., U.S. Pat. No. 5,078,130. Of course, in order to reject claims under § 102(b), a single prior art reference must disclose all features and limitations of the invention as claimed. It is respectfully submitted that Van Oosten does not teach all of the claim limitations of independent Claims 1 and 17 and, therefore, that rejection of Claims 1 and 17 should be withdrawn. Of course, Claims 3, 7, 9-11, and 14-15 are directly or indirectly dependent from Claim 1 and are further limiting thereto, therefore, rejection of these claims should be also withdrawn. In addition, Van Oosten does not teach all of the limitations of Claim 17, and therefore rejection of Claim 17 and dependent claim 19 should also be withdrawn.

More particularly, Claims 1 and 17 include as a limitation a face protection assembly including "... (iii) a flexible nosecup assembly within the shell, which nosecup assembly is positioned to engage the mouth and nose of the user, said nosecup comprising a breathe-through airflow assembly *and a filter unit*;...". It is clear that Van Oosten does not teach or suggest a modular helmet-mask assembly wherein the filtration unit is an integral part of the mask-helmet assembly. Van Oosten teaches a protective headgear system comprising a helmet and face shield, but without an integral filtration unit. If filtered air is required, Van Oosten uses a filtration and blower system which is external to the helmet/mask assembly and connected to it through flexible hose conduits.

See column 5, line 65, through column 6, line 11, and Figures 1-4 for a description of Van Oosten's external filtration unit. Clearly Van Oosten does not teach a filtration unit as an integral part of the mask/helmet assembly.

In contrast, applicants have invented a mask/helmet assembly which is designed to be used in a chemical-biological threat environment and also provide physical protection to the user, without the use of cumbersome external, add-on filtration units. Clearly, the Van Oosten patent doesn't include an integrated filtration system which is critical to this concept. Applicants have designed the present mask-helmet assembly primarily for the military. Military users really do not want body mounted equipment because there is no place in aircraft or other vehicles to readily mount or position such equipment. Integration of the chemical-biological filtration unit into a single helmet assembly is a key feature to applicant's design approach.

Van Oosten uses a design approach that is similar to approaches used in previous military design attempts for an integrated helmet. The design secures the helmet to the head and rotates or secures a pre-adjusted faceshield assembly into position. While this approach is marginally effective in an overblown condition, a reliable and effective seal has never been achieved in an unblown condition, i.e., without the use of forced air from a blower, using this design. Van Oosten's approach usually results in a very uncomfortable fit since the wearer is basically crushing his head into the helmet. Unblown protection is critical in scenarios where a blower system cannot or should not be used but is also paramount in the event of a blower or battery failure. Both situations apply in military requirements making the Van Oosten approach ineffective.

As recited in Claim 17, in applicant's design the facepiece assembly is mounted and secured using the facepiece suspension system first to assure a high quality negative pressure or unblown protection can be achieved. The rear portion of the helmet is then mounted and secured to the front module. Finally, the adjustment mechanism is activated to stabilize the helmet and to position the head relative to the nosecup and facepiece module. Enough play or "float" is built into the facepiece seal to accommodate this securing of the facepiece assembly and for the final positioning of the head. This overall approach not only allows for a much more comfortable and stable helmet system but also allows for reliable unblown protection so that the helmet can be worn with or without a blower system and so that adequate protection will be maintained in the event of blower failure. Both extended wear comfort and unblown protection are critical to military operations and to our knowledge have never been achieved in prior art for an integrated helmet system. Applicant's mask-helmet assembly as claimed in Claims 1 and 17 is clearly different from and not taught or suggested by Van Oosten.

Clearly, Van Oosten does not teach a filtration unit as an integral part of the mask/helmet assembly. Nor does it teach the positioning of a user's face into the facepiece, prior to placing the helmet on the user's head, such that an adequate seal can be made for unblown protection. Therefore, rejection of Claims 1, 3, 7, 9-11, 14-15, 17 and 19 as anticipated is untenable and should be withdrawn.

Claim 2, 12, and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Van Oosten in view of Stackhouse et al., U.S. Pat. No. 4,986,282. It was conceded that Van Oosten does not teach a position adjustable adjustment pad attached at the rear

part of the helmet. It has been asserted that Stackhouse teaches such a position adjustable pad. It is respectfully submitted that this assertion is untenable and should be withdrawn.

Claims 2, 12 and 18 are dependent from and further limiting to either Claims 1 or 17, and since as discussed above Claims 1 and 17 are patentable over Van Oosten, Claims 2, 12 and 18 should also be allowable. However, it is also important to point out that Stackhouse does not teach the position adjustable pad as described by applicants. Stackhouse teaches a headband which can be adjusted in size so that the headband can accommodate the size of the user's head. A pad is located on the back of the headband for comfort. See column 3, lines 25-35, of Stackhouse. However, applicants do not use a headband. In contrast, applicants use an adjustment pad positioned in the rear part of the helmet and controlled by a knob, which causes the adjustment pad to move forward from the rear part of the helmet to the front part. This action moves the user's head forward in the helmet to stabilize the helmet and to position the head relative to the nosecup and facepiece module. Therefore, the assertion that Stackhouse teaches an adjustable adjustment pad as described by applicants is untenable and should be withdrawn. Stackhouse does not teach or suggest the adjustment pad of the present invention and, therefore, rejection of Claims 2, 12 and 18 for obviousness should be withdrawn.

Claims 4, 6, and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Van Oosten in view of Sundahl, U.S. Pat. No. 4,549,541. Here again, Claims 4, 6 and 20 are dependent from either Claims 1 or 17, and are further limiting thereto. Therefore, based on the foregoing remarks regarding patentability of Claims 1 and 17, Claims 4, 6, and 20 should also be in condition for allowance.

Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Van Oosten in view of Epperson et al., U.S. Pat. No. 6,279,172. Claim 5 is directly dependent from Claim 1 and is further limiting thereto. Therefore, based on the foregoing arguments regarding patentability of Claim 1, Claim 5 should also be in condition for allowance.

Claims 8 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Van Oosten in view of Bieback et al., U.S. Pat. No. 6,121,881. Here again, Claims 8 and 16 are directly dependent from Claim 1 and are further limiting thereto, therefore, based on the patentability of Claim 1 these claims should also be in condition for allowance.

Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Van Oosten et al. in view of Japuntich et al., U.S. Pat. No. 5,509,436. Again, Claim 13 is directly dependent from Claim 1 and is further limiting thereto. Based on the patentability of Claim 1, Claim 13 should also be in condition for allowance.

In summary, Claims 1-7 and 9-20 remain in the case and based on the foregoing amendments and arguments should not be considered anticipated or obvious over the prior art cited. Accordingly, it is respectfully submitted that these claims are patentable and in condition for allowance. Early reconsideration and withdrawal of the rejections is earnestly solicited, as is allowance of the claimed subject matter.

Respectfully submitted,

March 26, 2003
DATE

U. John Biffoni
U. John Biffoni
Attorney for Applicant
Registration No. 39,908
Tel. No. (410) 436-1158